इंटरनेट मानक

Disclosure to Promote the Right To Information

Whereas the Parliament of India has set out to provide a practical regime of right to information for citizens to secure access to information under the control of public authorities, in order to promote transparency and accountability in the working of every public authority, and whereas the attached publication of the Bureau of Indian Standards is of particular interest to the public, particularly disadvantaged communities and those engaged in the pursuit of education and knowledge, the attached public safety standard is made available to promote the timely dissemination of this information in an accurate manner to the public.

“जानने का अधिकार, जीने का अधिकार”
Mazdoor Kisan Shakti Sangathan
“The Right to Information, The Right to Live”

“पुराने को छोड नये के तरफ”
Jawaharlal Nehru
“Step Out From the Old to the New”

IS 11715-2 (2012): Aerospace - Lead and Runout Threads, Part 2: Internal Threads [TED 14: Aircraft and Space Vehicles]

“ज्ञान से एक नये भारत का निर्माण”
Satyanarayan Gangaram Pitroda
“Invent a New India Using Knowledge”

Act Number 22 of 2005
The Indian Parliament
RIGHT TO INFORMATION

Made Available By
Public.Resource.Org

“ज्ञान एक ऐसा खजाना है जो कभी चुराया नहीं जा सकता है”
Bhartṛhari—Nītiśatakam
“Knowledge is such a treasure which cannot be stolen”

BLANK PAGE

BRUTUM FULMEN

IGNORANTIA
JURIS
NON EXCUSAT

PROTECTED BY COPYRIGHT

IS 11715 (Part 2) : 2012
ISO 3353-2 : 2002

भारतीय मानक

वायुयान — लीड एवं रनआउट चूड़ियाँ

भाग 2 आंतरिक चूड़ियाँ

(पहला पुनरीक्षण)

Indian Standard

AEROSPACE — LEAD AND RUNOUT THREADS

PART 2 INTERNAL THREADS

(First Revision)

ICS 49.030.10

© BIS 2012

BUREAU OF INDIAN STANDARDS
MANAK BHAVAN, 9 BAHADUR SHAH ZAFAR MARG
NEW DELHI 110002

April 2012 **Price Group 2**

Aircraft, Space Vehicles, Air Cargo Handling and Aircraft Electrical Equipment Sectional Committee, TED 14

NATIONAL FOREWORD

This Indian Standard (Part 2) (First Revision) which is identical with ISO 3353-2 : 2002 ‘Aerospace — Lead and runout threads — Part 2: Internal threads’ issued by the International Organization for Standardization (ISO) was adopted by the Bureau of Indian Standards on the recommendation of the Aircraft, Space Vehicles, Air Cargo Handling and Aircraft Electrical Equipment Sectional Committee and approval of the Transport Engineering Division Council.

This standard was first published in 1986 by adopting ISO 3353 : 1976 ‘Rolled threads for aerospace fasteners’. This standard has been undertaken with a view to bring it in line with the latest version of ISO 3353 published in two parts.

This standard is also published in two parts. Other part is:

Part 1 Rolled external threads

The text of ISO Standard has been approved as suitable for publication as an Indian Standard without deviations. Certain conventions are, however, not identical to those used in Indian Standards. Attention is particularly drawn to the following:

a) Wherever the words ‘International Standard’ appear referring to this standard, they should be read as ‘Indian Standard’.
b) Comma (,) has been used as a decimal marker while in Indian Standards, the current practice is to use a point (.) as the decimal marker.

In this adopted standard reference appear to the following International Standard for which Indian Standard also exists. The corresponding Indian Standard which is to be substituted in its place is listed below along with its degree of equivalence for the edition indicated:

International Standard	*Corresponding Indian Standard*	*Degree of Equivalence*
ISO 5855-1 Aerospace — MJ threads — Part 1: General requirements	IS 10980 (Part 1) : 1984 Specification for aerospace bolts and nuts (MJ threads): Part 1 Basic profile	Technically Equivalent

For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated expressing the result of a test or analysis, shall be rounded off in accordance with IS 2 : 1960 ‘Rules for rounding off numerical values (*revised*)’. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

Indian Standard

AEROSPACE — LEAD AND RUNOUT THREADS

PART 2 INTERNAL THREADS

(First Revision)

1 Scope

This part of ISO 3353 specifies the lead and runout thread and undercut requirements for internal threads (blind tapped holes) for aerospace construction.

It is applicable whenever it is referenced in a definition document.

2 Normative reference

The following normative document contains provisions which, through reference in this text, constitute provisions of this part of ISO 3353. For dated references, subsequent amendments to, or revisions of, any of these publications do not apply. However, parties to agreements based on this part of ISO 3353 are encouraged to investigate the possibility of applying the most recent edition of the normative document indicated below. For undated references, the latest edition of the normative document referred to applies. Members of ISO and IEC maintain registers of currently valid International Standards.

ISO 5855-1, *Aerospace — MJ threads — Part 1: General requirements*

3 Terms and definitions

For the purposes of this part of ISO 3353, the following terms and definitions apply.

3.1
lead threads
part of screw threads in which are located threads incompletely formed during cutting, beginning at the entering countersunk of the thread

3.2
runout threads
part of screw threads in which are located threads incompletely formed during cutting, between the completely formed threads and the end of the cylindrical part of the blind tapped hole

3.3
undercut
groove dug at the hole bottom to limit the threads with completely formed thread (except at the crossing between the last thread and the groove flank)

3.4
completely formed thread
thread, the profile of which ABC is located, over an axial distance of 1P, within the limits specified in the definition document for the thread

See Figure 1.

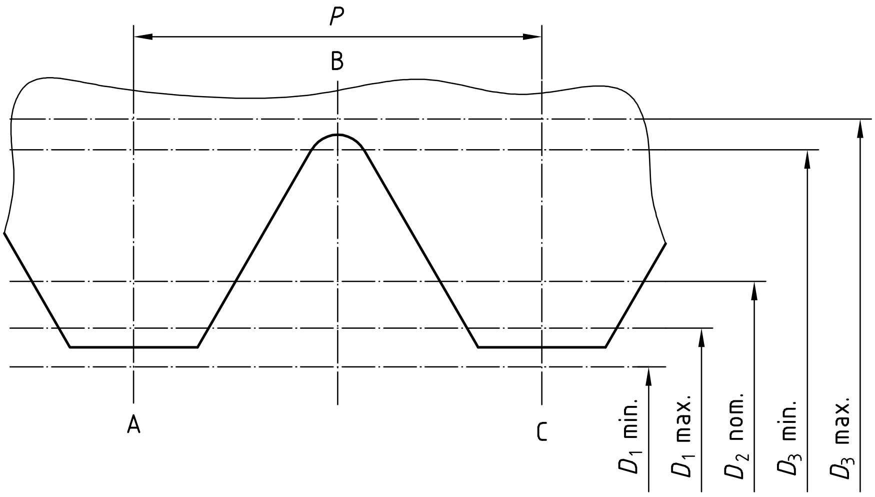


Figure 1

4 Symbols for threads

D_1 is the minor diameter of the thread.

D_2 is the pitch diameter of the thread.

D_3 is the major diameter of the thread.

P is the thread pitch.

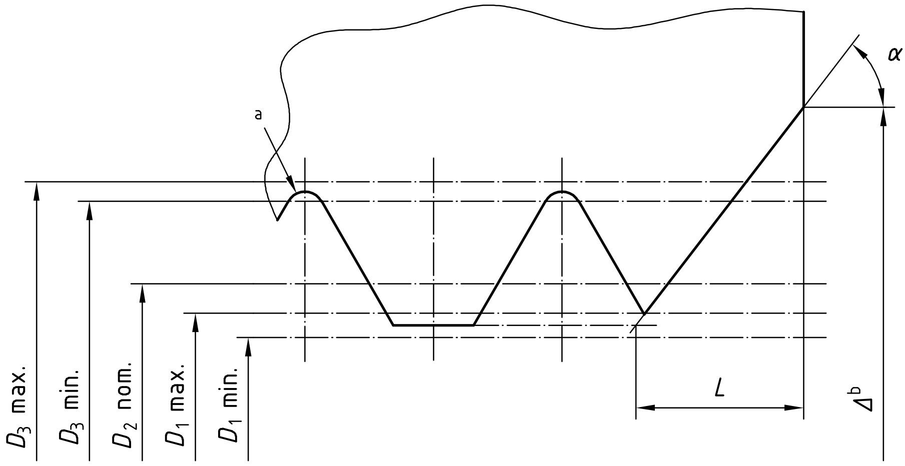
5 Requirements

5.1 General requirements

The flanks at the root of the incompletely formed threads shall be joined by a radius or by two radii and a flat, that are smooth and devoid of abrupt tool marks not compatible with respect to the roughness specified in the product standard. This radius, or these radii shall be greater than or equal to the calculated radius of the root of the maximum profile specified ISO 5855-1 (diameter D_3 max.).

5.2 Lead threads

See Figure 2.



NOTE Length L corresponds to the length of the lead threads. It results from the intersection of the entering countersunk and of the minor diameter of the thread D_1.

[a] Crest of first completely formed thread.

[b] $\Delta = D_3$ max. ${}^{+0,6}_{0}$, for $D \leqslant 5$ mm

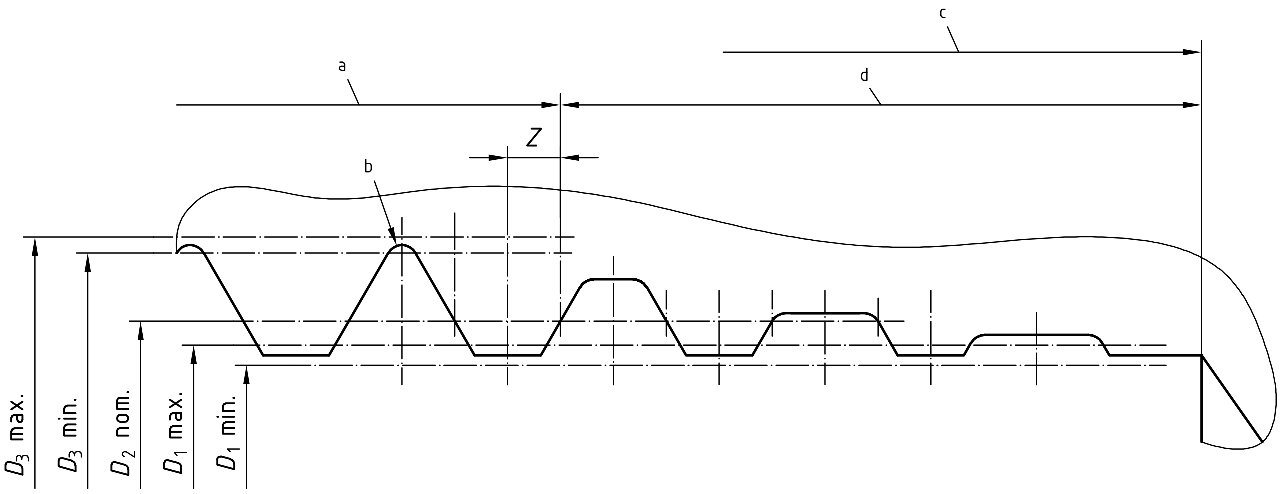
$\Delta = D_3$ max. ${}^{+0,8}_{0}$, for $D > 5$ mm.

[c] $45° \leqslant \alpha \leqslant 60°$.

Figure 2

5.3 Runouts

See Figure 3.



Over the area Z, the thread shall lie within the limits specified in the definition document for the thread.

[a] Required minimum full thread depth as specified on the product standard or drawing.

[b] Crest of first completely formed thread.

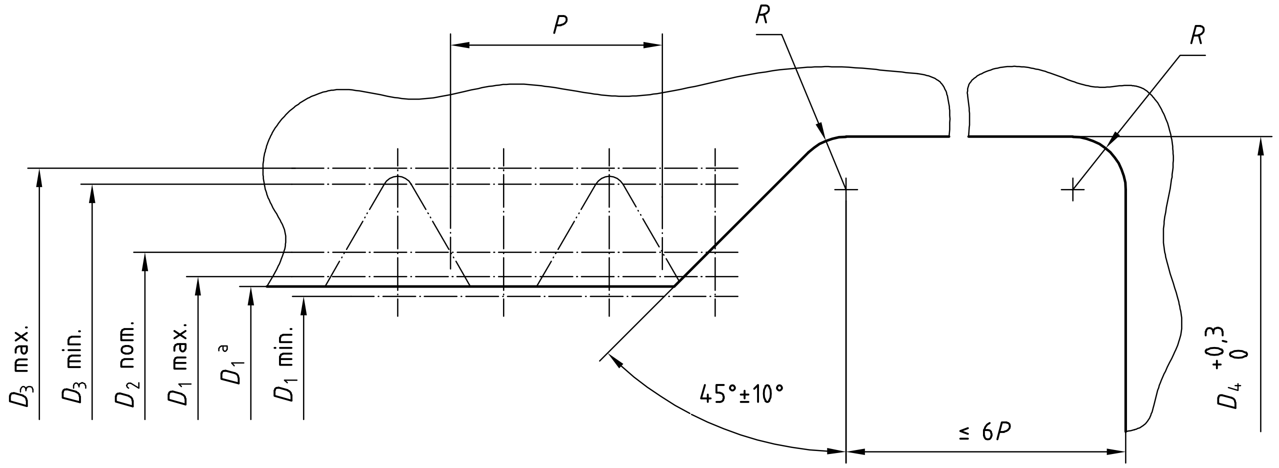
[c] Maximum hole depth as permitted by the product standard or drawing.

[d] Thread runout $\leqslant 10P$.

Figure 3

5.4 Undercuts

See Figure 4.



$0,25P \leqslant R \leqslant 0,5\,P$

$D_4 = D_3$ max. $+$ 0,3 mm for $P \leqslant 0,8$ mm

$D_4 = D_3$ max. $+$ 0,5 mm for $P > 0,8$ mm

[a] Actual.

Figure 4

Bureau of Indian Standards

BIS is a statutory institution established under the *Bureau of Indian Standards Act*, 1986 to promote harmonious development of the activities of standardization, marking and quality certification of goods and attending to connected matters in the country.

Copyright

BIS has the copyright of all its publications. No part of these publications may be reproduced in any form without the prior permission in writing of BIS. This does not preclude the free use, in course of implementing the standard, of necessary details, such as symbols and sizes, type or grade designations. Enquiries relating to copyright be addressed to the Director (Publications), BIS.

Review of Indian Standards

Amendments are issued to standards as the need arises on the basis of comments. Standards are also reviewed periodically; a standard along with amendments is reaffirmed when such review indicates that no changes are needed; if the review indicates that changes are needed, it is taken up for revision. Users of Indian Standards should ascertain that they are in possession of the latest amendments or edition by referring to the latest issue of 'BIS Catalogue' and 'Standards: Monthly Additions'.

This Indian Standard has been developed from Doc No.: TED 14 (670).

Amendments Issued Since Publication

Amendment No.	Date of Issue	Text Affected

BUREAU OF INDIAN STANDARDS

Headquarters:

Manak Bhavan, 9 Bahadur Shah Zafar Marg, New Delhi 110002
Telephones: 2323 0131, 2323 3375, 2323 9402 *Website*: www.bis.org.in

Regional Offices:		*Telephones*
Central	Manak Bhavan, 9 Bahadur Shah Zafar Marg NEW DELHI 110002	2323 7617 2323 3841
Eastern	1/14, C.I.T. Scheme VII M, V.I.P. Road, Kankurgachi KOLKATA 700054	2337 8499, 2337 8561 2337 8626, 2337 9120
Northern	SCO 335-336, Sector 34-A, CHANDIGARH 160022	260 3843 260 9285
Southern	C.I.T. Campus, IV Cross Road, CHENNAI 600113	2254 1216, 2254 1442 2254 2519, 2254 2315
Western	Manakalaya, E9 MIDC, Marol, Andheri (East) MUMBAI 400093	2832 9295, 2832 7858 2832 7891, 2832 7892

Branches: AHMEDABAD. BANGALORE. BHOPAL. BHUBANESHWAR. COIMBATORE. DEHRADUN. FARIDABAD. GHAZIABAD. GUWAHATI. HYDERABAD. JAIPUR. KANPUR. LUCKNOW. NAGPUR. PARWANOO. PATNA. PUNE. RAJKOT. THIRUVANATHAPURAM. VISAKHAPATNAM.

Published by BIS, New Delhi